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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/705,899   | 11/13/2003  | Joun Ho Lee          | 8733.275.20-US      | 6109             |
| 30827  | 7590        | 06/14/2005           | EXAMINER            |                  |
| MCKENNA LONG & ALDRIDGE LLP<br>1900 K STREET, NW<br>WASHINGTON, DC 20006 |             |                      |                     | NGUYEN, HOAN C   |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
|  |             |                      |                     | 2871             |

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |
|------------------------------|-----------------|--------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |
|                              | 10/705,899      | LEE ET AL.   |
|                              | Examiner        | Art Unit     |
|                              | HOAN C. NGUYEN  | 2871         |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 28 March 2005.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 22-31 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1 and 22-31 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 March 2005 has been entered.

Claims 2-21 are canceled. Claims 1 and 22-31 are pending.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 22-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No.

6671022. Although the conflicting claims are not identical, they are not patentably distinct from each other because

- claims 1 and 6 of U.S. Patent No. 6671022 is narrower than claim 1 of the instant application with an extra feature of auxiliary electrode connected to the gate lines (the auxiliary electrode lines formed in the same layer as the gate lines may not connect to the gate line).
- Claims 2-5 and 7-12 of U.S. Patent No. 6671022 participate with claims 22-31 of the instant application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al. (US5668650A).

In regard to claims 1 and 23, Mori et al. teach (Fig. 1) a multi-domain liquid crystal display device comprising:

- first substrate and second substrate (inherence for the active matrix LCD device);
- a liquid crystal layer inherently between the first and second substrates;
- data lines Ld for applying a data signal on the first substrate;
- gate lines Lg crossing the data lines to apply a gate signal;

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- pixel electrodes 2 for driving a liquid crystal of the liquid crystal layer;
- switching devices TFT 3 near crossing the gate lines and the data lines;
- auxiliary electrode lines AG formed in the same layer as the gate lines;

Claim 23:

- a common electrode inherently formed on the second substrate.

wherein

Claim 22:

- one of the auxiliary electrode line AG is formed between the pixel electrode 2 and data line Ld at outside of pixel electrode in a pixel as Fig. 1 shown.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US5668650A) as applied to claims 1 and 22-23 above, in view of Suzuki et al. (US6256082B1).

Mori et al. fail to disclose a multi-domain liquid crystal display device with the common electrode including an opening area.

Suzuki et al. disclose a multi-domain liquid crystal display device with the common electrode including an opening area for generating to divide each pixel into at least two liquid crystal domains for improving the properties for an angle of visibility.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a multi-domain liquid crystal display device as Mori disclosed with the common electrode including an opening area for generating to divide each pixel into at least two liquid crystal domains for improving the properties for an angle of visibility as taught by Suzuki et al. (col. 1 lines 39-42).

2. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US5668650A) as applied to claims 1 and 22-23 above, in view of Takeda et al. (US 6724452 B1).

Mori et al. fail to disclose a multi-domain liquid crystal display device with a dielectric structure on the second substrate.

Takeda et al. teach a multi-domain liquid crystal display device with a dielectric structure (dielectric protrusion) on the second substrate as domains regulating means for providing the ion adsorption capacity to the dielectric structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a multi-domain liquid crystal display device as Mori disclosed with a dielectric structure (dielectric protrusion) on the second substrate as domains regulating means for providing the ion adsorption capacity to the dielectric structure as taught by Takada et al. (col. 73 lines 10-17).

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3. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US5668650A) as applied to claims 1 and 22-23 above, in view of Yamamoto et al. (US5657100A).

Mori et al. fail to disclose a multi-domain liquid crystal display device wherein the liquid crystal layer has a positive dielectric anisotropy (claim 26) or negative dielectric anisotropy (claim 27).

Yamamoto et al. teach a liquid crystal display device wherein the liquid crystal layer has a positive dielectric anisotropy for obtaining high contrast ratio (col. 5 lines 22-31) or the liquid crystal layer has negative dielectric anisotropy for obtaining low contrast ratio (col. 7 lines 14-21).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a multi-domain liquid crystal display device as Mori disclosed with the liquid crystal layer has a positive dielectric anisotropy for obtaining high contrast ratio as taught by Yamamoto (col. 5 lines 22-31) or the liquid crystal layer has negative dielectric anisotropy for obtaining low contrast ratio as taught by Yamamoto (col. 7 lines 14-21).

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US5668650A) as applied to claims 1 and 22-23 above, in view of Patel (US5841500A).

Mori et al. fail to disclose a multi-domain liquid crystal display device with the liquid crystal layer including a chiral dopant.

Patel teaches a multi-domain liquid crystal display device with the liquid crystal layer including a chiral dopant for breaking the symmetry by inducing the twist only in one helical direction, and to thereby avoiding scattering from different domains. This solution is well known in the prior art (col. 3 lines 42-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a multi-domain liquid crystal display device as Mori et al. disclosed with the liquid crystal layer including a chiral dopant for breaking the symmetry by inducing the twist only in one helical direction, and to thereby avoiding scattering from different domains as taught by Patel (col. 3 lines 42-47).

5. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US5668650A) as applied to claims 1 and 22-23 above, in view of Kim et al. (US6335776B1).

Mori et al. fail to disclose a multi-domain liquid crystal display device with the phase differential film includes a negative uniaxial film (claim 30) or a negative biaxial film (claim 31).

Mori et al. fail to disclose a multi-domain liquid crystal display device with the phase differential film includes a negative uniaxial film for compensating effectively the right-left viewing-angle by widening the area without gray inversion, increasing contrast ratio in an inclined direction (col. 9 lines 53-60) or a negative biaxial film for obtaining wider viewing-angle characteristics as compared with the negative uniaxial film (col. 9 lines 61-67).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN  
Examiner  
Art Unit 2871

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